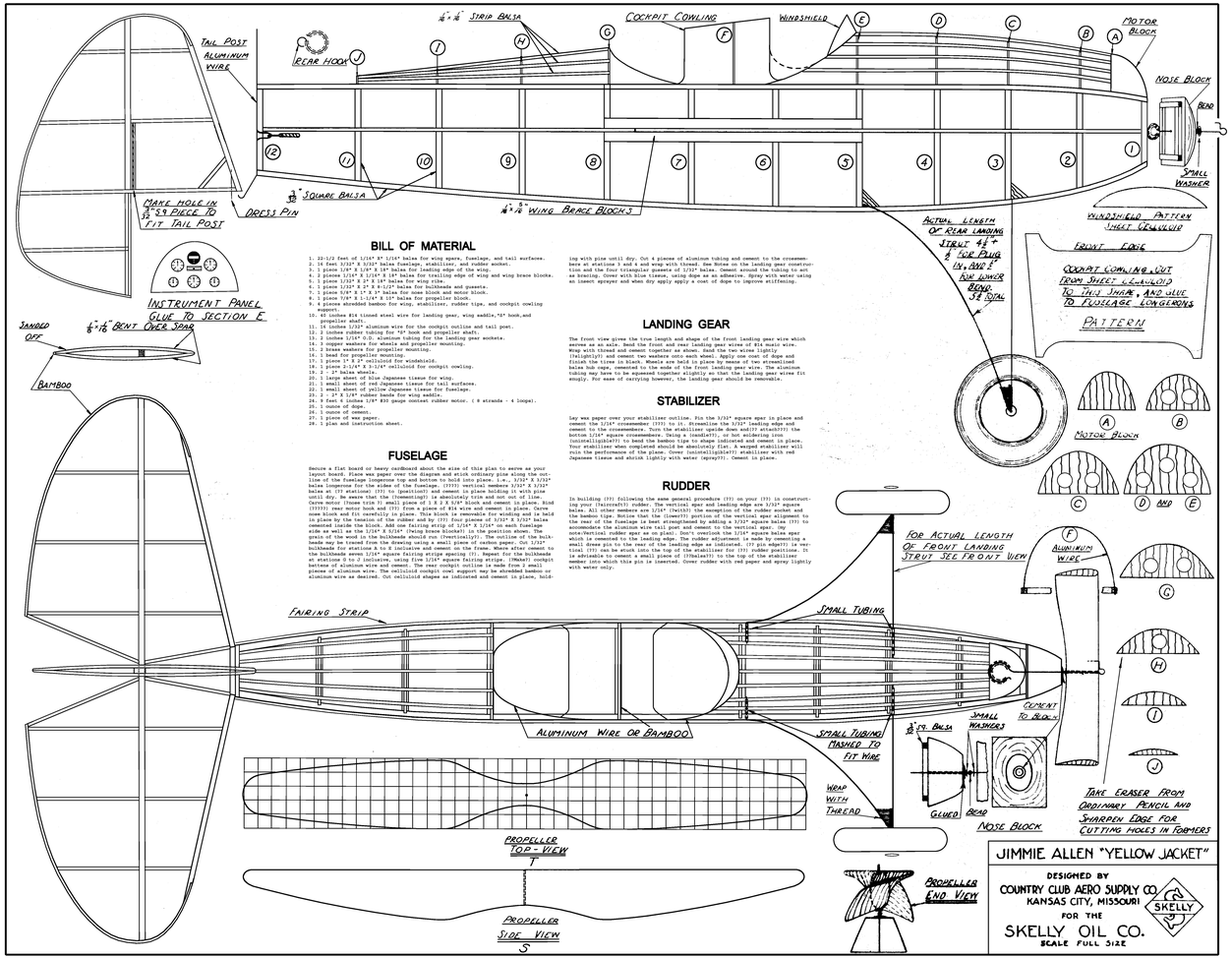


BILL OF MATERIAL

1. 21-1/2 feet of 1/16" X 1/16" balsa for wing spars, fuselage, and tail surfaces.
2. 16 feet 1/32" X 3/32" balsa fuselage, stabilizer, and rudder sheet.
3. 1 piece 1/8" X 1/8" X 18" balsa for leading edge of the wing.
4. 1 piece 1/16" X 1/16" X 18" balsa for trailing edge of wing and wing brace blocks.
5. 1 piece 1/32" X 2" X 18" balsa for wing ribs.
6. 1 piece 1/32" X 2" X 6-1/2" balsa for bulkheads and gussets.
7. 1 piece 5/8" X 1" X 4" balsa for nose block and motor block.
8. 1 piece 1/4" X 1/4" X 3" balsa for windshield bracing.
9. 4 pieces stranded bamboo for wing, stabilizer, rudder tips, and cockpit cowling support.
10. 40 inches #14 tinned steel wire for landing gear, wing saddle, "S" hook, and propeller shaft.
11. 12 inches #18 aluminum wire for the cockpit outline and tail post.
12. 2 inches rubber tubing for "S" hook and propeller shaft.
13. 2 inches 1/16" O.D. aluminum tubing for the landing gear sockets.
14. 3 copper washers for wheels and propeller mounting.
15. 2 brass washers for propeller mounting.
16. 1 hook for propeller mounting.
17. 1 piece 3" piece celluloid for windshield.
18. 1 piece 2-1/4" x 3-1/4" celluloid for cockpit cowling.
19. 2 - 2" balsa wheels.
20. 1 large sheet of blue Japanese tissue for wing.
21. 1 small sheet of red Japanese tissue for tail surfaces.
22. 1 small sheet of yellow Japanese tissue for fuselage.
23. 1 oz. bottle of cement (Ambroid).
24. 4 feet 6 inches 1/8" #20 gauge contest rubber motor. (8 strands - 4 loops).
25. 1 ounce of dope.
26. 1 ounce of cement.
27. 1 piece of wax paper.
28. 1 plan and instruction sheet.

FUSELAGE

Secure a flat board or heavy cardboard about the size of this plan to serve as your layout board. Place wax paper over the diagram and stick ordinary pins along the outline of the fuselage longerons top and bottom to hold into place. i.e., 1/32" X 3/32" balsa longerons for the sides of the fuselage. (????) vertical members 1/32" X 3/32" X 3" balsa (?) cut to fit. Cement the joints where they cross. Allow the cement to dry until dry. Be aware that the (?cementing?) is absolutely trix and not out of line. Carve motor (?some trim ?) small piece of 1 X 2 X 5/8" block and cement in place. Bind (????) rear motor hook and (??) from a piece of #14 wire and cement in place. Carve nose block and fit carefully in place. This block is removable for winding and is held in place by a rubber band stretched around the hooks in the nose and tail. Cement loosely inside the block. Add one fairing strip of 1/16" X 1/16" on each fuselage side as well as the 1/16" X 5/16" (?wing brace blocks?) in the position shown. The grain of the wood in the bulkheads should run (?vertically?). The outline of the bulkheads may be traced from the drawing using a small piece of carbon paper. Cut 1/32" bulkheads for stations A to H inclusive and cement on the frame. Where after cement to the bulkheads seven 1/16" square fairing strips spacing (?). Repeat for the bulkheads on the other side. The cockpit outline is made from a piece of 18" length of straight bateue of aluminum wire and cement. The rear cockpit outline is made from 2 small pieces of aluminum wire. The celluloid cockpit cowl support may be shredded bamboo or aluminum wire as desired. Cut celluloid shapes as indicated and cement in place, holding with pins until dry. Cut 4 pieces of aluminum tubing and cement to the crossmembers at stations 1 and 4 and wrap with thread. See Notes on the landing gear construction and the four triangular gussets of 1/32" balsa. Cement around the tubing to act as bracing. Cover with blue tissue, using dope as an adhesive. Spray with water using an insect sprayer and when dry apply apply a coat of dope to improve stiffening.

LANDING GEAR

The front view gives the true length and shape of the front landing gear wire which serves as an axle. Bend the front and rear landing gear wires of #14 music wire. Wrap with thread and cement together as shown. Sand the two wires lightly (?slightly?) and cement two washers onto each wheel. Apply one coat of dope and finish the tires in black. Wheels are held in place by means of two streamlined (?) pieces of aluminum tubing. Sand the wheels slightly (?) so that the aluminum tubing may have to be squeezed together slightly so that the landing gear wires fit snugly. For ease of carrying however, the landing gear should be removable.

STABILIZER

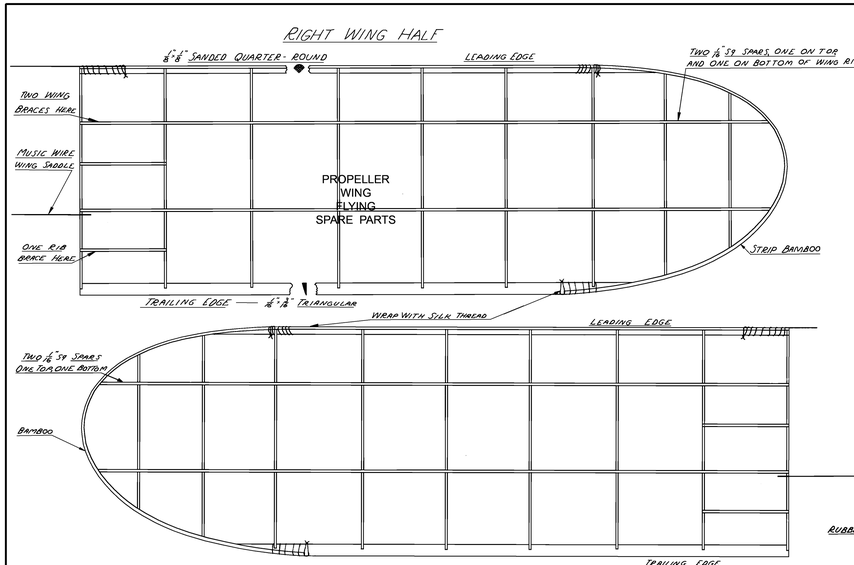
Lay wax paper over your stabilizer outline. Pin the 3/32" square spar in place and cement. Add the remaining pieces. Let dry. Sand lightly (?) and add the tips and cement to the crossmembers. Turn the stabilizer upside down and(?? attach??) the bottom 1/16" square crossmembers. Using a (sandle??), or hot soldering iron (unintelligible??) to bend the bamboo tips to shape indicated and cement in place. Your stabilizer when completed should be absolutely flat. A warped stabilizer will ruin the performance of the plane. Cover (unintelligible??) stabilizer with red Japanese tissue and shrink lightly with water (spray??). Cement in place.

RUDDER

In building (??) following the same general procedure (??) on your (??) in constructing your (?aircraft?) rudder. The vertical spar and leading edge are 3/32" square balsa. All other members are 1/16" (?wide?) the exception of the rudder socket and the bamboo tips. Notice that the (lower??) portion of the vertical spar alignment to the rear of the fuselage is best strengthened by adding a 3/32" square balsa (??) to accommodate the aluminum wire tail post and cement to the vertical spar. (my (unintelligible??) rudder socket is made from a piece of #14 wire bent to shape and spar which is cemented to the leading edge. The rudder adjustment is made by cementing a small dress pin to the rear of the leading edge as indicated. (?? pin edge??) is vertical (??) can be stuck into the top of the stabilizer for (??) rudder positions. It is advisable to cement a small piece of (??balsa??) to the top of the stabilizer member into which this pin is inserted. Cover rudder with red paper and spray lightly with water only.

JIMMIE ALLEN "YELLOW JACKET"

DESIGNED BY
COUNTRY CLUB AERO SUPPLY CO.
KANSAS CITY, MISSOURI
FOR THE
SKELLY OIL CO.
SCALE FULL SIZE



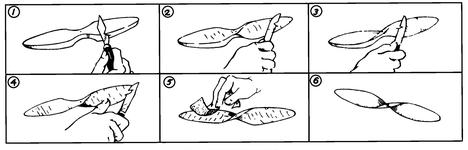
NOTE

This plan was prepared in Photoshop from a very weak scan of the original. As the lines of the scan were too weak and often missing for a normal restoration, it had to be retraced in its entirity except for a few areas. Also, the building and flying instructions were re-typed. The scanned copy was so weak and missing in areas that some sections of new typed copy had to be interpretations and guesses. Thus you will notice some question marks indicating unintelligible words. I want to thank the members of RC Groups RB6 that contributed to the de-cyphering of the copy. These were Rmcnx, WMD, Lincoln, Aeronca63, Davidharrell80, Pertitme, Sundancer, and Rogerc41. They did what I thought was an impossible Job!

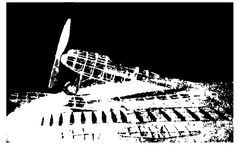
Rufus Carswell
Atlanta, GA, USA
"Planeman"

PROPELLER

Using carbon paper, trace outline T on? propeller block. Make a hole straight through the center of propeller block, using a large needle for this purpose. Be certain this hole is in exact center on both sides of propeller block. Carve and sand to shape of outline T, then trace outline S on the sides just sanded and carve to shape of outline S. Hold block with outline T on top and start carving on upper right edge as shown in #1 of propeller chart, keeping a rounded shape at all times. Do not cut closer at the tips or edges than 1/16". Now follow this same procedure for other end of block as shown in #2 and #3. Next carve the back of the blade until each blade is about 1/16" thick at the tips and increasingly thicker toward the hub. Sand the propeller to a smooth finish and balance by sanding the heavy side. Apply two coats of dope, sanding between each coat. Bend propeller hook from music wire to shape as shown except the loop which will hold the rubber motor. Insert this hook through propeller, place small brass washer over this wire and cement in place. Next take the nose block, drill hole as shown and cement large copper washer in place. Slide the bead, then a small washer, and lastly the nose block onto the propeller hook. Now bend the propeller hook as shown to hold the rubber motor and slip a piece of rubber tubing over this hook. Make a four loop rubber motor and tie the ends together. Rubber motor may be lubricated by using a good grade of soft soap. Place rubber motor loops over front and rear hooks and your plane is now ready for test flights.



ASSEMBLY OF STRUCTURAL MEMBERS



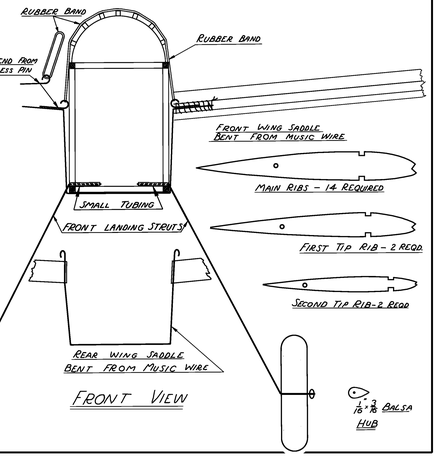
THE COMPLETED JIMMIE ALLEN "YELLOW JACKET"

WING

Cut out the 18 ribs required for the wing and holding them together, sand accurately to shape. Cut notches and holes in ribs for spars. The middle spars are made from 1/16 square balsa, the leading edge from 1/8 square balsa streamlined, and the trailing edge from 1/16 x 3/16 balsa cut or sanded to a wedge shape. Lay wax paper over diagram and assemble right and left wing directly on top of this drawing. Notice that the trailing edge is notched 1/16 inch to receive ribs. Bend 1/32 inch square bamboo for wing tips and tie them securely in place to the spars with thread, then cement. The two outer ribs on each wing should be cemented after the bamboo is in place. The front and rear wing saddle wires are next bent from two pieces of #14 wire as shown. These wing saddle wires should be carefully bent so that the leading edge of the wing rests adjacent to the 1/16 square fairing strip on the fuselage, and so that the trailing edge of the wing is approximately 1/16 inch below the bottom of the faring strip. The wires should be tilted slightly so that each wing will have about 1° dihedral angle, as shown in the front view of the fuselage. The ends of the rear saddle wire are bent into a hook shape to receive the wing saddle rubber bands. These rear saddle wires are merely cemented to the inside of the middle ribs and to the 1/16 square rear wing spars. These rear spars are reinforced with a piece of 1/16 square balsa cemented on top of them between the two inner ribs. The front wing saddle wire is cemented to the front of the leading edge of the wing and securely fastened with thread. The front wing saddle bands are hooked over two dress pins bent as shown and cemented to the leading edge of the wing and wrapped with thread. Don't overlook the installation of the three 1/16" square braces to be cemented between the two inner ribs of each wing. Cover the wing with blue paper, taking care to avoid any wrinkles. The simplest method is to use four pieces of paper and cover one-half of each side of the wing at a time. The paper should be stretched lengthwise, never across the wing, which tends to ruin the air-foil. Shrink paper first with water, then with dope as you did on the fuselage. In order to counteract the propeller torque it may be necessary to warp 1/8 inch more angle of incidence into the left wing as viewed from the cockpit than the right wing. This warping can be done by holding the wing in the warped position for a few moments in front of a steaming teakettle spout.

FLYING

Make all your test flights on a clam day. Glide the plane by launching it gently. If it climbs, hesitates and then dives, the wing must be moved back slightly. If it dives quickly when first launched, the wing must be moved forward slightly. After obtaining a good glide the motor may be wound to not over 150 turns and then launched. If a good flight is obtained full power may be applied. If you do not lubricate your motor and wind it by turning the propeller without stretching the rubber, the motor will break at from 265 to 350 turns depending upon its condition. If the motor has been lubricated with C.C. lubricant or a good grade soft soap and is stretched to twice its normal length when winding, it will withstand 550 to 650 turns.. For duration flying, rubber motors should always be lubricated and stretched during the winding process. If your plane has been built heavier than usual, you may require an additional loop of rubber to obtain maximum performance.

SPARE PARTS

Spare parts, cement, dope, extra rubber motors and other accessories for this plane may be obtained from Country Club Aero Supply Company, Kansas City, Mo.